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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,773	01/16/2002	Juan-Antonio Carballo	UOM 0246 PUS	7707

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EXAMINER
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PALADINI, ALBERT WILLIAM

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/050,773

Applicant(s)

CARBALLO ET AL.

Examiner

Albert W. Paladini

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/16/02.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is no description of the process recited in claim 1 or the system recited in claim 11. The elements and operations depicted in figure 1, which appears to be the basis for the implementation of a real world constraint based guidance methodology, are not described. The function of each block in figure 1 is not provided. An abstract, generalized symbolic discussion of some sort of "design process modeling framework" is given on pages 6-8. In this discussion, design constraints are represented symbolically by relationship 1, which hints of some relationship between constraints and properties. Similarly, a relationship, which references something called design transition, is given in relationship 2. Not all of the variables of the relationships are defined, and the methodology of applying these to a real world design environment is not provided. To be an invention, the description must be written in terms of real world

concepts, and the method of implementation must be clearly described. Actual equations used to evaluate constraints are one possible tool.

The abstract discussion on pages 6-8 is followed on pages 9-14 by another generalized abstract discussion of constraint based heuristic support, which is expressed in terms of items like a "feasible subspace". A constraint relationship is given at the top of page 11 but none of the variables are described. Constraints are expressed symbolically in equation 3, but most of the variables are not defined. In addition, there is no practical methodology, which enables one to put these abstract relationships into practice. They are not defined in terms of units, or any kind of a real world measure. The generalized symbolic abstract discussion and the relationships 1-3, which have no practical definition, do not support the elements of figure 1, and consequently the methodology of claim 1 and the system of claim 11.

The generalized abstract discussions and associated symbolism do not support development of a real world method and system for providing design constraint guidelines. There is no description of how to implement this invention. The abstract, symbolic, conceptual discussions cannot be applied to the real word design environment. There is not description of the methodology and the rationale behind the methodology.

Appropriate correction and clarification are required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

### **Claim 1**

Lines 5-8 recite two sequential steps of the method.

Lines 5-6 recite "generating a network of design constraints which represent interactions among the variables of the design". The interpretation of this step is that the ranges of the variables and the interactions between the variables cause conflicts and problems, which may cause the design not to meet its objectives. This results in placing constraints on the variables to avoid the conflicts. Therefore, the "conflict information" must be known at this time.

Then, lines 7-8 recite, "evaluating the network design constraints to obtain conflict information in response to the signals". This does not follow logically from the previous step recited in lines 5-6. In lines 5-6, interactions between the variables cause conflicts which result in the application of design constraints. Thus the conflicts are known in the first step. However, in lines 7-8, the design constraints are evaluated to obtain conflict information. Lines 5-6 explain that interactions between variables cause conflicts, which result in the imposition of design constraints. Since the conflicts must

me known in order to impose design constraints, the step of obtaining conflict information from design constraints recited in lines 7-8 does not follow.

### **Claim 11**

Lines 5-8 recite two means, which perform sequential steps.

Lines 5-6 recite "a design process manager for generating a network of design constraints which represent interactions among the variables of the design". The function performed by the design process manager is that the ranges of the variables and the interactions between the variables cause conflicts and problems, which may cause the design not to meet its objectives. This results in placing constrains on the variables to avoid the conflicts. Therefore, the "conflict information" must be known at this time.

Then, lines 7-8 recite, "a constraint manager for evaluating the network of design constrains to obtain conflict information in response to the signals". This does not follow logically from the function recited in lines 5-6. In lines 5-6, interactions between the variables cause conflicts which result in the application of design constrains. Thus the design process manager knows the conflicts. However, in lines 7-8, the design constraints are evaluated to obtain conflict information. Lines 5-6 explain that interactions between variables cause conflicts, which result in the imposition of design constraints by the design process manager. Since the conflicts must me known in order to impose design constraints, the function of the constraint manager to obtain conflict information from design constraints recited in lines 7-8 does not follow..

One philosophy in a design environment is that the analysis of variables result in potential conflicts between the variables. To avoid these conflicts, design constraints are imposed on the variables. Since the specification did not provide practical support for the claimed subject matter, the claims were given a literal interpretation.

Appropriate correction and clarification is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Narain (6651228).

This rejection is made by addressing those specific claim limitations, which were understood.

Referring to figure 2, (column 11 line 33 to column 12, line 16), Narain discloses a constraint based method and system for providing guidance to a designer. Narain discloses a system and method where the interaction between the components (column 11 line 33 to column 12, line 16) is used in conjunction with the design intent and the design constraints (lines 16 to 39 in column 7) provide constraint based guidance feedback to the designer (figure 2, block 250).

***Relevant Prior Art***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Elfe (6445782) discloses a service management system for communications where conflicts are identified if any two or more constraints are incompatible.

Marple (6587992) discloses a system and method for compacting layouts, where compaction is a method used to optimize an IC layout subject to a set of design rule constraints, and where the layout objects are constrained by design rule interactions.

Okano (6868716) discloses a product shape designing process applied to a tire profile considering constraint design variables like radius of curvature, arc center position, and arc length. A response surface can be approximated with high precision without taking into consideration variable interactions by using deformed shapes in Eigen modes of a product as basil shapes.

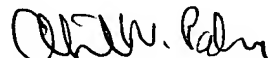
Farrah (6882892) discloses a system and method for specifying design of at least two links in a packaging chain where constraints are applied which limit the conflicts caused between variables whose limits are breached.

8. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

August 12, 2005

  
Albert W. Paladini  
Primary Examiner  
Art Unit 2125